

# 2009 City Drinking Water Quality Report

## Definitions

### Public Health Goal (PHG)

The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

### Maximum Contaminant Level Goal (MCLG)

The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

### Maximum Contaminant Level (MCL)

The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

### Maximum Residual Disinfectant Level Goal (MRDLG)

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

### Maximum Residual Disinfectant Level (MRDL)

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

### Regulatory Action Level (AL)

The concentration of a contaminant which, if exceeded, triggers a treatment or other requirements which a water system must follow.

### Treatment Technique (TT)

A required process intended to reduce the level of contaminants in drinking water.

### Primary Drinking Water Standards (PDWS)

MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.

### Secondary Drinking Water Standards (SDWS)

MCLs for contaminants that effect taste, odor, or appearance of drinking water. Contaminants with SDWS do not affect the health at MCL levels.

### Unregulated Contaminant Monitoring Regulations (UCMR)

Data generated by the new UCMR will be used to evaluate and prioritize contaminants on the Drinking Water Contaminant Candidate List, a list of contaminants EPA is considering for possible new drinking water standards. Also known as "State Regulated Contaminants with No MCLs."

## Legend

- µg/L:** Micrograms per liter (parts per billion)
- mg/L :** Milligrams per liter (parts per million)
- ND:** Not detected at testing limit
- NTU:** Nephelometric Turbidity Units
- pCi/L :** PicoCuries per liter (a measure of radiation)
- µmhos/cm:** Micromhos per centimeter
- DBP:** Disinfection By-products
- NA:** Not applicable or no standard or no data

## PRIMARY STANDARDS

Regulated Contaminants with Primary MCLs or MRDLs								
		Maximum Contaminant Level (MCL)	Public Health Goal	Highest Single Measurement		Samples ≤0.3 NTU		Major Sources in Drinking Water
Microbiological Contaminants								
Turbidity (NTU)		NA	TT = 1 NTU TT = 95% of samples ≤0.3 NTU	0.06		100%		Natural river sediment/soil run-off
Lead/Copper Rule	Monitored at the Customer's Tap			90th % Value	# of Sites Sampled	# of Sites Exceeding Action Level		
Copper (mg/L)		AL, 1.3	0.3	0.26	31	0		Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (µg/L)		AL, 15	0.2	2.9	31	0		
Disinfection By-products, Disinfectant Residuals, and Disinfection By-product Precursors				System Wide Average		System Wide Range		
Total Trihalomethanes (µg/L)		80	NA	55.1		2.6 - 126		By-product of water disinfection
Haloacetic Acids (µg/L)		60	NA	8.6		ND - 19.0		By-product of water disinfection
Disinfectant - Chlorine as Cl <sub>2</sub> (mg/L)		MRDLG, 4.0	MRDLG, 4	0.63		ND - 2.60		Drinking water disinfectant added to treatment
		MCL	Public Health Goal	Surface Water Average	Surface Water Range	Groundwater Average	Groundwater Range	Various natural and manmade sources. Total Organic Carbon (TOC) has no health effects. However, it provides a medium for the formation of disinfection by-products.
Control of DBP Precursors - TOC (mg/L)		TT	NA	2.76	2.24 - 3.19	0.36	0.21 - 0.55	
Radioactive Contaminants								
Gross Alpha Particle Activity (pCi/L)		15	MCLG, 0	ND	NA	ND	ND - 3.7	Erosion of natural deposits
Radon (pCi/L)		NA	NA	NA	NA	315	310 - 320	See reporting notice on Radon in this report.
Inorganic Contaminants								
Aluminum (mg/L)		1	0.6	0.08	0.01 - 0.30	0.03	ND - 0.25	Erosion of natural deposits
Arsenic (µg/L)		10	0.004	1.3	1.1 - 3.5	0.5	ND - 1.9	Erosion of natural deposits
Chromium (µg/L)		50	MCLG, 100	1.8	ND - 5.6	4.3	ND - 11.9	Erosion of natural deposits
Fluoride (mg/L)		2.0	1	0.43	0.24 - 0.52	0.36	ND - 0.60	Erosion of natural deposits; discharge from fertilizer & aluminum factories
Nitrate as NO <sub>3</sub> (mg/L)		45	45	0.37	ND - 1.24	9.95	0.58 - 41.6	Erosion of natural deposits; run-off from fertilizer use
Selenium (µg/L)		50	MCLG, 50	ND	No Range	7.6	No Range	Erosion of natural deposits
State Regulated Contaminants with No MCLs, i.e. Unregulated Contaminants								
		MCL	Public Health Goal	Surface Water Average	Surface Water Range	Groundwater Average	Groundwater Range	
Boron (µg/L)		Notification Level, 1000	NA	380	No Range	110	70 - 160	
Hexavalent chromium, - Cr VI (µg/L)		NA	NA	ND	NA	0.58	ND - 1.90	Erosion of natural deposits

## SECONDARY STANDARDS

*Aesthetic Standards Established By the State of California, Department of Health Services.  
No adverse health affects from exceedence of standards.*

Regulated Contaminants with Secondary MCLs							
	MCL	Public Health Goal	Surface Water Average	Surface Water Range	Groundwater Average	Groundwater Range	
Color (Units)	15	NA	ND	NA	0.25	ND - 7	Naturally-occurring organic materials
Copper (mg/L)	1	NA	0.01	ND - 0.05	0.02	0.001 - 0.09	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Iron (µg/L)	300	NA	ND	NA	42	ND -280	Leaching from natural deposits
Manganese (µg/L)	50	NA	0.2	ND - 2.5	62.6	ND - 200	Naturally-occurring organic materials; causes discoloration of water
Methyl-tert-butyl ether (MTBE) (µg/L)	5	NA	ND	NA	1.5	ND - 6.6	Leaking underground gasoline storage tanks; discharge from gasoline and chemical factories
Threshold Odor Number at 60 °C (units)	3	NA	6	2 - 15	9	1-20	Naturally-occurring organic materials
Turbidity, Laboratory (NTU)	5	NA	0.12	0.07 - 0.20	0.4	0.09 - 1.23	Soil run-off
Uranium (µg/L)	NA	NA	NA	NA	6.5	5.8 - 7.2	Erosion of natural deposits
Zinc (mg/L)	5	NA	0.01	0.006 - 0.02	0.02	ND - 0.17	Naturally-occurring in trace amounts, but can be detected in soft, acidic water systems
Total Dissolved Solids (mg/L)	1000	NA	651	568-714	810	596 - 1160	Run-off / leaching from natural deposits
Specific Conductance (µmhos/cm)	1600	NA	925	852 - 1044	1156	866 - 1758	Run-off / leaching from natural deposits; seawater influence
Chloride (mg/L)	500	NA	22.2	17.2 - 27.4	100	42.8 - 213	Run-off / leaching from natural deposits; seawater influence
Sulfate (mg/L)	500	NA	268	216 - 300	236	156 - 369	Run-off / leaching from natural deposits
Additional Constituents							
pH (units)	NA	NA	8.05	7.80 - 8.22	6.99	6.61 - 7.22	
Total Hardness as CaCO <sub>3</sub> (mg/L)	NA	NA	398	344 - 430	465	214 - 676	
Total Alkalinity as CaCO <sub>3</sub> (mg/L)	NA	NA	190	178 - 204	248	200 - 313	
Calcium as Ca (mg/L)	NA	NA	91.3	79.3 - 99.3	123	84 - 162	
Magnesium (mg/L)	NA	NA	40	33 - 48	39	22 - 66	
Sodium (mg/L)	NA	NA	45	39 - 52	67	42 - 100	
Potassium (mg/L)	NA	NA	4.4	4.0 - 4.7	1.8	1.3 - 2.7	

**Note:** Listed in the table above are substances detected in the City's drinking water. Not listed are more than 135 regulated and unregulated substances that were below the laboratory detection level.